

WHAT IS CLAIMED IS:

1. A process for conserving the effectiveness of a particulate, food grade antioxidant or antioxidant-containing particles comprises the step of pretreating the antioxidant or the antioxidant-containing particles, prior to formulation into a food or a food supplement,
5 with about 9% to about 90% by weight of a food-grade oil and/or a fat having a melting point below about 80°C and optionally up to about 5% by weight an emulsifier, the weights being based on the weight of the antioxidant or the antioxidant-containing particles.
2. The process of Claim 1, wherein the particles are about 1 to about 150 microns, wherein
10 the antioxidant and antioxidant-containing particles are selected from the group consisting of butylated hydroxyanisole, butylated hydroxytoluene, tertiary butylated hydroquinone, propyl gallate, a phenolic acid, a polyphenol, ascorbic acid, stannous chloride, a tocopherol, sulfur dioxide, and dilauryl thiodipropionate; wherein the oil and/or the fat is selected from the group consisting of cocoa butter, a polyol ester, a sterol
15 ester, a stanol ester, a triglyceride, a fatty alcohol ester of a polycarboxylic acid, an esterified alkoxyated polyol, a glycerol ester, and a vegetable oil, a partially hydrogenated vegetable oil and mixtures thereof; and wherein the emulsifier is selected from the group consisting of lecithin, a mono- or diglyceride, an ethoxylated mono- or diglyceride, a phospholipid, an ester of a monoglyceride and acetic, lactic, citric,
20 succinic, or tartaric acid, a fatty acid ester of a polyglycerol, a sorbitan ester, a sucrose ester, propylene glycol, polyglycerol polyresorcinoleate, and mixtures thereof.
3. The process of Claim 2, wherein the antioxidant-containing particles are mixtures of cocoa polyphenols present in fully defatted or partially defatted cocoa solids having a particle size of about 5 to about 70 microns; and wherein the particles are pretreated with
25 about 20% to about 40% by weight of sterol ester(s) and/or stanol ester(s).
4. A process for conserving the effectiveness of a particulate food grade antioxidant or antioxidant-containing particles comprises the step of pretreating the antioxidant or the antioxidant-containing particles, prior to formulation into a food or a food supplement, with about 0.05% to about 5% by weight of a lecithin.
- 30 5. The process of Claim 4, wherein the antioxidant-containing particles are mixture of cocoa polyphenols present in fully or partially defatted cocoa solids; having a particle size of up

to about 150 microns and wherein the particles are pretreated with about 0.03 % to about 0.1 % of soy lecithin.

6. An additive for a food or a food supplement comprising partially or fully defatted cocoa solids pretreated by mixing with about 9% to about 90% by weight, based on the cocoa solids, of sterol ester(s) and/or stanol ester(s) which are liquids at temperatures of about 80°C or less, wherein the cocoa solids after pretreatment have a cocoa procyanidin content of at least about 4.5 milligrams per gram of defatted cocoa solids.
7. An additive for a food or a food supplement comprising partially or fully defatted cocoa solids pretreated by mixing with about 0.05% to about 5% by weight, based on the cocoa solids, of a lecithin, wherein the cocoa solids prior to pretreatment have a cocoa procyanidin content of at least about 5 milligrams per gram of defatted coca solids.
8. A process for preparing a binder syrup for a food or a food supplement comprises the step of mixing at about 20°C to 160°C (i) a syrup and (ii) partially or fully defatted cocoa solids pretreated by mixing with about 9% to about 90% by weight, based on the cocoa solids, of sterol ester(s) and/or stanol ester(s) which are liquids at temperatures of about 80°C or less, wherein the cocoa solids in the binder have a cocoa procyanidin content of at least about 4.5 milligrams per gram of defatted cocoa solids.
9. A binder syrup prepared by the process of Claim 8.
10. A binder syrup comprising a mixture of (i) a syrup and (ii) cocoa solids are pretreated with about 9% to about 90% by weight of sterol ester(s) and/or stanol ester(s) and optionally with up to about 5% by weight of a lecithin and/or up to about 20% by weight of a chocolate liquor; wherein the binder syrup is liquid at about 40°C to 80°C and solid at room temperature, the weights being based on the cocoa solids.
11. A process for preparing a dry, ready-to-eat food comprises the steps of:
 - (a) pretreating cocoa solids having a cocoa procyanidin content of at least about 5 milligrams per gram of defatted cocoa solids with about 9% to about 90% by weight of sterol ester(s) and/or stanol ester(s) and optionally with up to about 20% by weight of a chocolate liquor and/or about 0.05% to 5% by weight of an emulsifier; the weights being based on the cocoa solids;

(b) mixing the pretreated cocoa solids and a syrup with a mixture of dry ingredients comprising grain(s), flour(s), and/or protein(s) and optionally dried fruits and/or nuts to obtain a formable food; and

(c) forming the food;

5 wherein the pretreated cocoa solids and the syrup are liquid when blended into the dry ingredients and solid when the formed food is cooled to room temperature.

12. The process of Claim 11, further comprising the steps of decorating or enrobing the formed food with chocolate, a yogurt, or a flavored sugar.

13. The process of Claim 11, wherein the pretreated cocoa solids and the syrup are premixed
10 at about 60°C to about 80°C to form a binder syrup prior to blending with the dry ingredients.

14. The process of Claim 11, wherein the cocoa solids are partially defatted cocoa solids containing about 8-30% fat and having a cocoa procyanidin content of at least about 50 to about 150 milligrams; wherein the sterol ester(s) are prepared from rapeseed oil; wherein
15 the emulsifier is selected from the group consisting of lecithin, a monoglyceride, a diglyceride, an ethoxylated mono- or diglyceride, a phospholipid, an acetic, lactic, citric, succinic, or diacetyl tartaric acid ester of a monoglyceride, a polyglycerol, sorbitan, a sucrose ester, or a propylene glycol ester of a fatty acid, polyglycerol polyresorcinoleate, and mixtures thereof; wherein the syrup further comprises an ingredient selected from the
20 group consisting of a whole milk powder, a skim milk powder, a malted milk powder, a flavorant, one or more vitamins or minerals, a sugar, a salt, and mixtures thereof; and wherein the dry ingredients are selected from the group consisting of rice crisps, soy crisps, oats, bran flour, corn flour, wheat flour, rice flour, a milk protein, an egg protein, a soy protein, a whey, and combinations thereof.

25 15. The process of Claim 14, wherein the cocoa solids have a cocoa procyanidin content of about 50 to 80 milligrams; wherein the sterol ester(s) comprise ester of β -sitosterol, campesterol, and stigmesterol; wherein the emulsifier is lecithin; wherein the flavorant is vanilla; wherein the syrup is corn syrup having a DE of about 40 to about 65; and wherein the sugar is a brown sugar and/or fructose, and wherein the dry ingredients
30 comprise rice crisps, soy crisps, and/or oats.

16. A dry, ready to eat granola bar prepared by the process of Claim 15.

17. The bar of Claim 16, which contains about 65% to 100% of the cocoa procyanidins present in the cocoa solids.
18. The bar of Claim 17, which contains about 90% to 100% of the cocoa procyanidins.
19. A dry, ready to eat health bar containing sterol ester(s) and/or stanol ester(s) and at least
5 about 2 milligrams of cocoa procyanidins per gram of the bar.
20. A process for preparing a chocolate confectionery comprises the steps of:
- (a) pretreating cocoa solids having a cocoa procyanidin content of at least about 5 milligrams per gram of defatted cocoa solids with about 9 to about 90% of sterol ester(s) and/or stanol ester(s) and optionally up to about 20% of chocolate liquor
10 and/or about 0.5% to about 5% of an emulsifier;
 - (b) blending the pretreated cocoa solids with a syrup at about 20 C to about 160 C;
 - (d) cooling the blend; and
 - (e) shaping the cooled blend into the confectionery.
- 15 21. The process of Claim 20, wherein the cocoa solids have a fat content of about 8% to about 30% and a cocoa procyanidin content of about 50 to about 150 mg; wherein the sterol ester(s) are prepared from rapeseed oil; wherein the emulsifier is selected from the group consisting of lecithin, a monoglyceride, a diglyceride, an ethoxylated mono- or
20 diglyceride, a phospholipid, an acetic, lactic, citric, succinic, or diacetyl tartaric acid ester of a monoglyceride, a polyglycerol, sorbitan, a sucrose ester, a propylene glycol ester of a fatty acid, polyglycerol polyresorcinoleate, and mixtures thereof; wherein the chocolate liquor is a dark chocolate liquor of a milk chocolate liquor present in an amount of about 0.5% to about 10%; and wherein the syrup is an aqueous solution of a nutritive
25 carbohydrate sweetener or an artificial sweetener having a moisture content of about 5 to about 25%; and wherein the syrup further comprises a gum, vitamin(s) and/or mineral(s), a sugar, and/or a flavorant.
22. The process of Claim 21, wherein the sterol esters, the chocolate liquor, and the lecithin are premixed before mixing with the cocoa solids; and wherein the syrup is a corn syrup having a DE of about 40 to about 65.
- 30 23. A dark chocolate or milk chocolate chew prepared by the process of Claim 22.

24. The chew of Claim 23, which contains about 65% to 100% of the cocoa procyanidins present in the cocoa solids.
25. The chew of Claim 24, which contains about 90% to 100% of the cocoa procyanidins.
26. A dark or milk chocolate chew containing sterol ester(s) and/or a stanol ester(s) and at
5 least about 2 milligrams of cocoa procyanidins per gram of the chew.